

2/1/2023

**FOR YOUR INFORMATION**

2023-21/9-3

1957382

To: Airport Manager, San Francisco International Airport (SFO), CA, FAA (AAS-1)

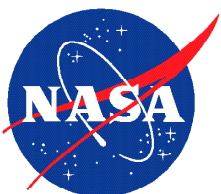
Info: FAA (AAS-300, AWP-600, AFS-260, ATM SFO Tower, ATM NCT TRACON, AFS-200, AJI -144, AVP-1, AVP-200, Director of Air Traffic Operations WSA, Runway Safety Team), A4A, AAAE, ALPA, APA, ASAP, ATSAP, ATSG, CAPA, IATA, IBT, ICAO, ICASS, IFALPA, IPA, NATCA, NTSB, RAA, SWAPA

From: Becky L. Hooey, Director  
NASA Aviation Safety Reporting System

Re: SFO Airport Area LED Light Pollution Concern

We recently received ASRS reports describing a safety concern that may involve your area of operational responsibility. We do not have sufficient details to assess either the factual accuracy or possible gravity of the report. It is our policy to relay the reported information to the appropriate authority for evaluation and any necessary follow-up. We feel you should be aware of the enclosed deidentified report.

To properly assess the usefulness of our alert message service, we would appreciate it if you would take the time to give us your feedback on the value of the information that we have provided. Please contact Dr. Becky Hooey at (408) 541-2854 or email at [becky.l.hooey@nasa.gov](mailto:becky.l.hooey@nasa.gov).



Aviation Safety Reporting System  
P.O. Box 189 | Moffett Field, CA | 94035-0189



## ACN 1957382

### DATE / TIME

Date of Occurrence	202212
Local Time Of Day	0601 to 1200

### PLACE

Locale	SFO.Airport
State	CA

### AIRCRAFT / EQUIPMENT X

Make Model Name	Large Transport
Operating Under FAR Part	121

### PERSON 1

Function - Flight Crew	Captain
Function - Flight Crew	Pilot Flying
ASRS Report Number	1957382

### EVENTS

Anomaly	Deviation / Discrepancy - Procedural - Other / Unknown
Anomaly	Ground Event / Encounter - Ground Equipment Issue
Detector - Person	Flight Crew
Result - Flight Crew	Became Reoriented

### NARRATIVE 1

This is to report a safety hazard that has really grown since the advent of LED lighting, with the extreme example I observed on final to 28L in SFO really underscoring the need for the FAA to become involved in corrective action. There is a lighting installation on that approach, apparently associated with the Coyote Point Recreation area, that really drives the issue home. The unbelievably excessive uplighting from that area destroys night vision, and I think constitutes the worst of example of the growing trend that I've seen to date. Once night vision is impacted, it can take several minutes for it to recover. These lights are too close to the runway to allow complete recovery.

LED lighting is very efficient and cheap to produce, so there is little economic incentive to use it judiciously and efficiently. All lights seen from the air are 100% wasted light, since none of the light that allows you to see them from the air is hitting the ground. Early roadway lighting manuals addressed these issues, but as lighting has gotten cheaper and easier to produce, our designs have become sloppier and sloppier, culminating in the extreme example on the approach in to 28L in SFO. The FAA really needs to get involved in seeing to it that all lighting within 5 miles of the approach end of a runway complies with IESA (Illuminating Engineering Society of America) specifications for Fully Shielded lighting, or B and G ratings of 0-1 under the BUG (Backlight Uplight Glare) system.

### SYNOPSIS

Air carrier Captain reported LED lighting at the Coyote Point Recreation Area underneath a 4 to 5 mile final to SFO Runway 28L "...destroys night vision..."